

Work Order ID 60985

August 3, 2010 2:54:44 PM



Page 1

Item ID: D350-636-011

Accept



Setup Start



Revision ID:

Stop



Item Name: Skidtube LH

Start Date: 8/03/10 Start Qty: 1.00



Cust Item ID:

Required Date: 8/12/10 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: H

Date: 10-8-03

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D2750

Rev F

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-011 CHG 005

H for MF 10-8-17

S1065117

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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110



Skidtubes

Skidtubes

Skidtubes

Memo

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.

4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting

5- Drill fwd step holes using DT9616. Ensure proper positioning.

6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-1 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B)
ONLY DRILL ONE SIDE OF FWD SADDLE HOLES USING DT81507- Clecko DT8863B on second side of tube and drill pilot holes for detail B.
SECOND SIDE

8- Clecko DT9642 and drill fwd saddle holes on second side, ensure proper positioning.

9-Open up holes for Detail B to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail C to 0.500" (8 holes per side)

10-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to

DD
10-8-10

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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

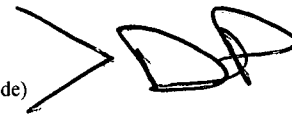
0.297".

11-Open up holes of Detail A to 0.297" (total of 2 holes per side)

12-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004

A/R Aluminum Rod batch: ☐

13-Grind welds flush as per Dwg D2750



10-8-10

M114242

BE 10-8-11

BE

10-8-11

120



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

S1010211

Memo

0.00

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S1010211

Memo

0.00

②

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

DP 10-8-11

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

BF 10-8-11

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Customer:

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Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Open up holes of Detail C and ground handling to 0.625" (total of 8 holes per side)
as per dwg D2750.

2-Open up holes of Detail B to 0.750" (total of 4 holes per side)
as per dwg D2750.

3- Open float hole to 0.500" (4 per side)

4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750
(welding instructions on sheet 8)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R ☐☐☐ Sikaflex-291 batch: M115114☐☐☐
exp. date: 11-1-30

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004
(welding instructions on sheet 8)

A/R ☐☐☐ Aluminum Rod batch: M114242

9- At section AJ-AJ drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D2750

Handwritten: DP 10-8-11
BE 10-8-12
BE 10-8-12
BE 10-8-12

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Spot face ground handling holes section (total of 4 places per side) as per
dwg D2750

BE 10/08/12

12-Deburr holes

BE 10/08/12

170



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

S 10/08/13

Memo

0.00

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S 10/08/13

Memo

0.00

Q10

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 HandFinish	Pressure Wash per QSI005 4.3	0.00				ml	10	08	16 (1)
Hand Finishing	Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.	0.00							
200 Powdercoat	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00				1	0		
Powder Coating	Memo START TIME: 11:30am OVEN TEMPERATURE: 320°F FINISH TIME: 12:00pm	0.00							
210 QC	QC3- Inspect Part Finish	0.00				ml	10	08	16 (1)
Quality Control	Memo Inspect for foreign object per QSI 024	0.00							

=> ml 10/08/14

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220

0.00



HandFinishing

=> M

10/08/16

1

Ø

HandFinish

Memo

0.00

Hand Finishing

1- Install inserts as per Dwg D2750

230

0.00



HandFinishing

=> M

10/08/16

1

9

HandFinish

Memo

0.00

Hand Finishing

1-Inspect for Foreign Objects

2-Spray inside of tube with "LPS-3" batch: N/A

3-Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750

SIKA FLEX 241

BATCH: 1115114

EXP DATE: 11/01

4-assemble o-ring to plug as per dwg D3492 and apply o-ring lube

A/R 55-o-ring lube batch: 11114189

5-Coat all exposed fasteners with "LPS Procyon" batch: 11104251

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Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							
Quality Control									
250	Pick Kit	0.00							
Packaging	Memo	0.00							
Packaging									
260	QC4- 100% Inspect kits for completeness	0.00							
QC	Memo	0.00							
Quality Control	*****ensure antiseize is on AN8C21A bolts*****								

8/10/08/16

④

10/8/17

8/10/08/17

④

W/O:		WORK ORDER CHANGES					
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270

0.00



Packaging

Packaging

Memo

Package as per PPP D350-636-011

0.00

DEV H

Loc 72

10/8/17

280

0.00



QC

QC21- Final Inspection - Work Order Release

Memo

0.00

Quality Control

10/08/17

mf

10-8-17

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Picklist Print

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Page 1

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Parent Item: D350-636-011

Parent Item Name: Skidtube LH



Start Date: 8/03/10

Required Date: 8/12/10

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-23 As per Rev D JLM
 IPP Rev: K 06-07-13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC
 IPP Rev: M 08-04-22 update steps 4, 13 DD verified by: EC
 IPP Rev: N 08-09-23 revF as per dwg DD verified by: ec
 IPP Rev: O 09-02-06 apply antiseize on AN8C21A bolts as per PAR09-010
 DD verified by: EC IPP Rev: P 10.06.22
 revise seq 110 DD verf: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2594-3		Manufactured	No			230	Each	379.0000	8	8			
O-Ring, 205 Skidtube													

Location	Loc Qty	Loc Code
FP	379	
55546	19	
58191	12	
69358	348	

x8 10/08/10

D2744		Manufactured	No			110	Each	38.0000	1	1			
Cap													

Location	Loc Qty	Loc Code
LG	38	
51922	2	
59198	36	

1 10-8-11

D2600-3-BENT		Manufactured	No			110	Each	16.0000	1	1			
Extrusion Bent													

Location	Loc Qty	Loc Code
LG	16	
59410	16	

B59410

10-8-10

W/O:		WORK ORDER CHANGES					
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Start Date: 8/03/10

Required Date: 8/12/10

Start Qty: 1.00

Required Qty: 1.00

D2743 Manufactured No 160 Each 299.0000 8 8
Crossbolt Spacer

Location	Loc Qty	Loc Code
LG	299	
50281	10	
57953	2	
59111	287	

B BE 10-8-12

D2739 Manufactured No 160 Each 1.0000 1 1
350 I Beam

Location	Loc Qty	Loc Code
LG	1	
59406	1	

DP 10-8-11

D3490-3 Manufactured No 160 Each 54.0000 4 4
Cross Bolt Spacer

Location	Loc Qty	Loc Code
LG	54	
59229	14	
60294	40	

4 BE 10-8-12

D3490-1 Manufactured No 160 Each 19.0000 4 4
Cross Bolt Spacer

Location	Loc Qty	Loc Code
LG	19	
59424	19	

4 BE 10-8-12

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Start Date: 8/03/10

Required Date: 8/12/10

Start Qty: 1.00

Required Qty: 1.00

*ALS4-1032-225

Purchased

No

220

Each

5,957.000

38

38



Insert

Location

Loc Qty

Loc Code

PK011

5957

110768

5957

230

Each

93.0000

8

8

D3492-041

Manufactured

No



Plug Assembly

Location

Loc Qty

Loc Code

FP013

93

59114

24

59420

69

230

Each

13.0000

1

1

D3793-3

Manufactured

No



Wearshoe

Location

Loc Qty

Loc Code

FP18

12

59631

12

FP19

1

57947

1

230

Each

58.0000

1

1

AN8C35A

Purchased

No



BOLT

Location

Loc Qty

Loc Code

FP

1

110847

1

ST346

57

114442

27

115188

30

x38 M 10/08/10

x5 M 10/08/10

x1 M 10/08/10

x1 M 10/08/10

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Shop Packet Print

Page 3

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Start Qty: 1.00

Required Qty: 1.00

D3793-1 Manufactured No

230 Each

15.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP18

15

59151

2

59630

13

D3488-041 Manufactured No

230 Each

18.0000

1

1



Blade Fitting Assembly, LH

Location

Loc Qty

Loc Code

FP

11

53915

11

FP007

7

56052

7

D3794-3 Manufactured No

230 Each

24.0000

1

1



Gasket

Location

Loc Qty

Loc Code

FP10

12

60826

12

FP18

12

56066

11

59153

1

YI 21 10/08/10

YI 21 10/08/10

YI 21 10/08/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 3, 2010 2:54:48 PM

Work Order ID: 60985

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 8/03/10

Required Date: 8/12/10

Start Qty: 1.00

Required Qty: 1.00

AN6C44A

Purchased

No

230

Each

177.0000

4

4



BOLT



Location

Loc Qty

Loc Code

FG

2

103964

2

ST344

175

111649

2

114653

1

114784

47

114941

75

115030

50

XL MU 10/08/16

MS21083C8

Purchased

No

230

Each

58.0000

1

1



NUT



Location

Loc Qty

Loc Code

ST303

58

113845

7

114934

51

XL MU 10/08/16

D3536-25

Manufactured

No

230

Each

29.0000

1

1



Gasket



Location

Loc Qty

Loc Code

FP12

29

58820

5

59625

24

XL MU 10/08/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 6

August 3, 2010 2:54:48 PM

Work Order ID: 60985

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 8/03/10

Required Date: 8/12/10

Start Qty: 1.00

Required Qty: 1.00

D3631-1 Manufactured No

230

Each

571.0000

8

8



Washer

Location

Loc Qty

Loc Code

ST072

297

60755

297

ST076

274

52693

206

54388

68

x8 M 10/08/16

D3791-1 Manufactured No

230

Each

20.0000

1

1



Wearplate

Location

Loc Qty

Loc Code

FP17

20

58573

11

59626

9

x1 M 10/08/16

AN960C10L Purchased No

230

Each

29.0000

38

38



washer

Location

Loc Qty

Loc Code

ST245

29

107534

29

x38 M 10/08/16

D2745 Manufactured No

230

Each

169.0000

8

8



Bushing

Location

Loc Qty

Loc Code

ST023

169

52311

5

59112

164

x8 M 10/08/16

August 3, 2010 2:54:48 PM

Shop Packet Print

Page 6

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 3, 2010 2:54:48 PM

Work Order ID: 60985



Parent Item: D350-636-011



Parent Item Name: Skidtube LH

Start Date: 8/03/10

Required Date: 8/12/10

Start Qty: 1.00

Required Qty: 1.00

AN3C5A

Purchased

No

230

Each

1,364.000

34

34



Bolt

Location

Loc Qty

Loc Code

ST350

1354

114330

11

115015

743

115108

300

115316

300

ST351

10

113121

10

x34 10/08/16

D3537-1

Manufactured

No

230

Each

13.0000

3

3



Wearpad

Location

Loc Qty

Loc Code

FP

1

55465

1

FP17

12

57713

3

59593

9

1360192

x3 10/08/16

AN960C816L

Purchased

No

230

Each

23.0000

1

1



WASHER

Location

Loc Qty

Loc Code

ST348

23

110584

20

111424

3

x1 10/08/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 3, 2010 2:54:48 PM

Work Order ID: 60985



Parent Item: D350-636-011



Parent Item Name: Skidtube LH

Start Date: 8/03/10

Required Date: 8/12/10

Start Qty: 1.00

Required Qty: 1.00

D3492-043

Manufactured No

230

Each

51.0000

8

8



Plug Assembly



Location

Loc Qty

Loc Code

FP

2

54682

2

FP013

49

59117

1

59190

4

59421

14

60712

30

x6 M 10/08/16
x2 M 10/08/16

AN3C6A

Purchased

No

230

Each

425.0000

4

4



BOLT



Location

Loc Qty

Loc Code

ST351

425

111982

425

x4 M 10/08/16

NAS1611-013

Purchased

No

230

Each

67.0000

8

8



O-RING



Location

Loc Qty

Loc Code

FP

67

114451

51

114496

16

x8 M 10/08/16

D3535-25

Manufactured

No

230

Each

24.0000

1

1



Wearshoe



Location

Loc Qty

Loc Code

FP18

24

59623

24

x1 M 10/08/16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 3, 2010 2:54:48 PM

Work Order ID: 60985

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 8/03/10

Required Date: 8/12/10

Start Qty: 1.00

Required Qty: 1.00

D3794-1 , Manufactured No

230 Each

19.0000

1 1



Gasket

Location

Loc Qty

Loc Code

FP010

19

57942

18

59627

1

✓ 1 10/08/10

MS21043-6

Purchased No

230 Each

726.0000

4 4



NUT

Location

Loc Qty

Loc Code

ST301

726

112314

726

X 4 10/08/10

D3493-1

Manufactured No

260 Each

55.0000

2 2



Washer

Location

Loc Qty

Loc Code

ST065

55

59127

25

60873

30

2

MS21083C8

Purchased No

260 Each

58.0000

1 2



NUT

Location

Loc Qty

Loc Code

ST303

58

113845

7

114934

51

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 3, 2010 2:54:48 PM

Work Order ID: 60985

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 8/03/10

Required Date: 8/12/10

Start Qty: 1.00

Required Qty: 1.00

AN8C21A

Purchased

No

260

Each

59.0000

2

2



BOLT



10/8/17 SP

Location

Loc Qty

Loc Code

ST345

59

113558

19

114653

40

8

AN960C816L

Purchased

No

260

Each

23.0000

1

2



WASHER



10/8/17 SP

Location

Loc Qty

Loc Code

ST348

23

110584

20

111424

3

2

D3672-1

Manufactured

No

230

Each

1,011.000

4

4



Phenolic Washer



Location

Loc Qty

Loc Code

ST077

993

51674

5

52505

988

ST117

18

34470

18

X4 M 10/08/16

D2741

Manufactured

No

260

Each

22.0000

1

1



Blade, 350 Skidtube



10/8/17 SP

Location

Loc Qty

Loc Code

ST466

22

55905

2

57949

20

1

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 3, 2010 2:54:48 PM

Work Order ID: 60985



Parent Item: D350-636-011



Parent Item Name: Skidtube LH

Start Date: 8/03/10

Required Date: 8/12/10

Start Qty: 1.00

Required Qty: 1.00

D3532-1

Manufactured No

260

Each

33.0000

2



2
10/8/17 SP

Spacer

Location

Loc Qty

Loc Code

ST068

33

59426

11

60510

22

2

D3672-13

Purchased No

260

Each

844.0000

2



2
10/8/17 SP

Phenolic Washer

Location

Loc Qty

Loc Code

ST077

844

54363

844

2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

5

4

3

2

1

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- 1) MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- 8) WELD PER DART QSI 004
- 9) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- 10) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 60925
270-8-03

RELEASED
6-27-22

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741, QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.16		

DART AEROSPACE USA, INC.	
PORT HADLOCK, WA	
DRAWING NO.	REV. F
D2750	SHEET 1 OF 11
TITLE	SCALE
350 SKIDTUBE ASSEMBLY	NTS
COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.	
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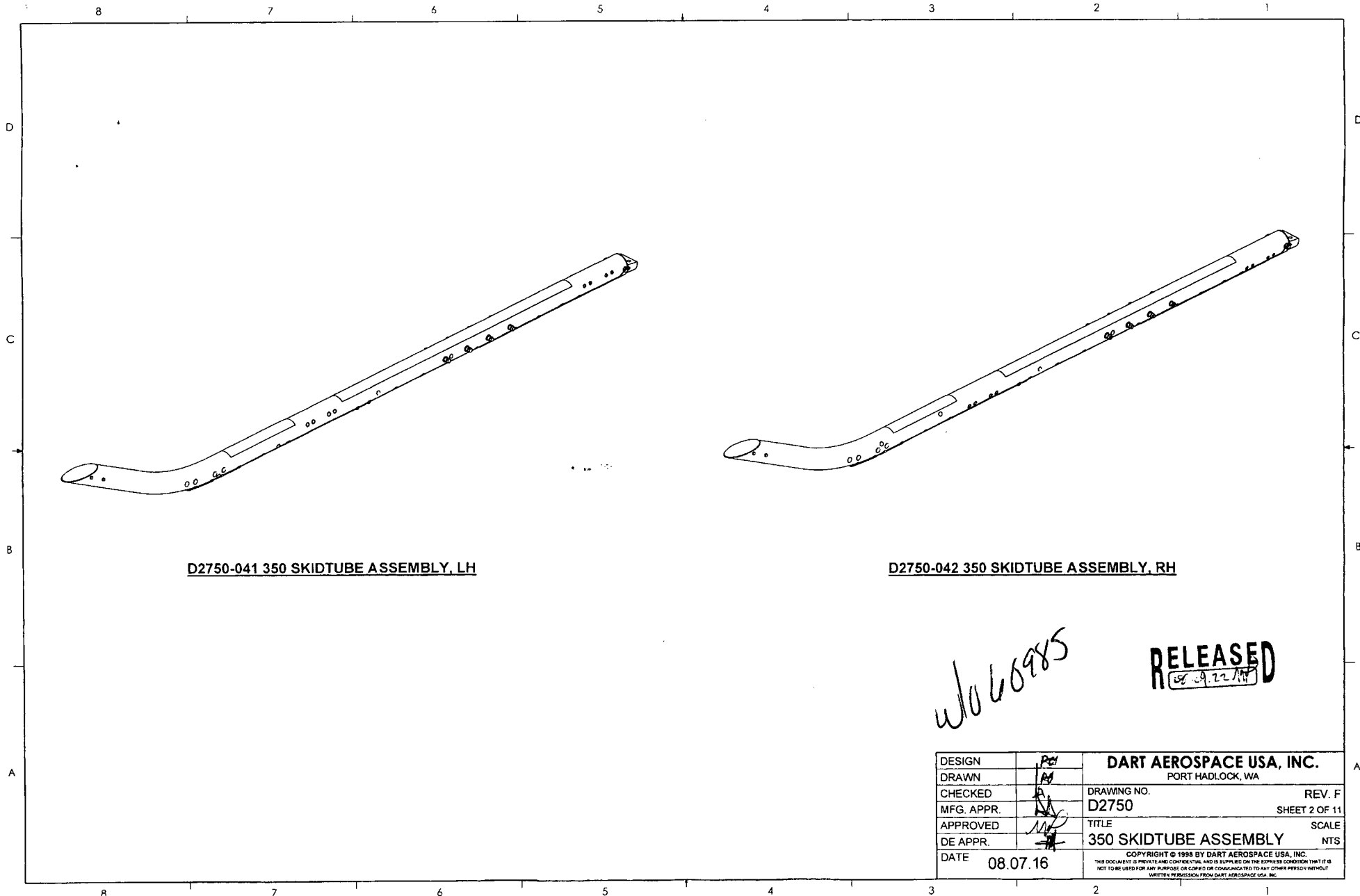
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



WJ060985

RELEASED
158-09-22-111

DESIGN	PC	DART AEROSPACE USA, INC.	
DRAWN	RM	PORT HADLOCK, WA	
CHECKED	SA	DRAWING NO.	REV. F
MFG. APPR.	MM	D2750	SHEET 2 OF 11
APPROVED	MM	TITLE	SCALE
DE APPR.	MM	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE REPRODUCED FOR ANY PURPOSE OR COMMERCE TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

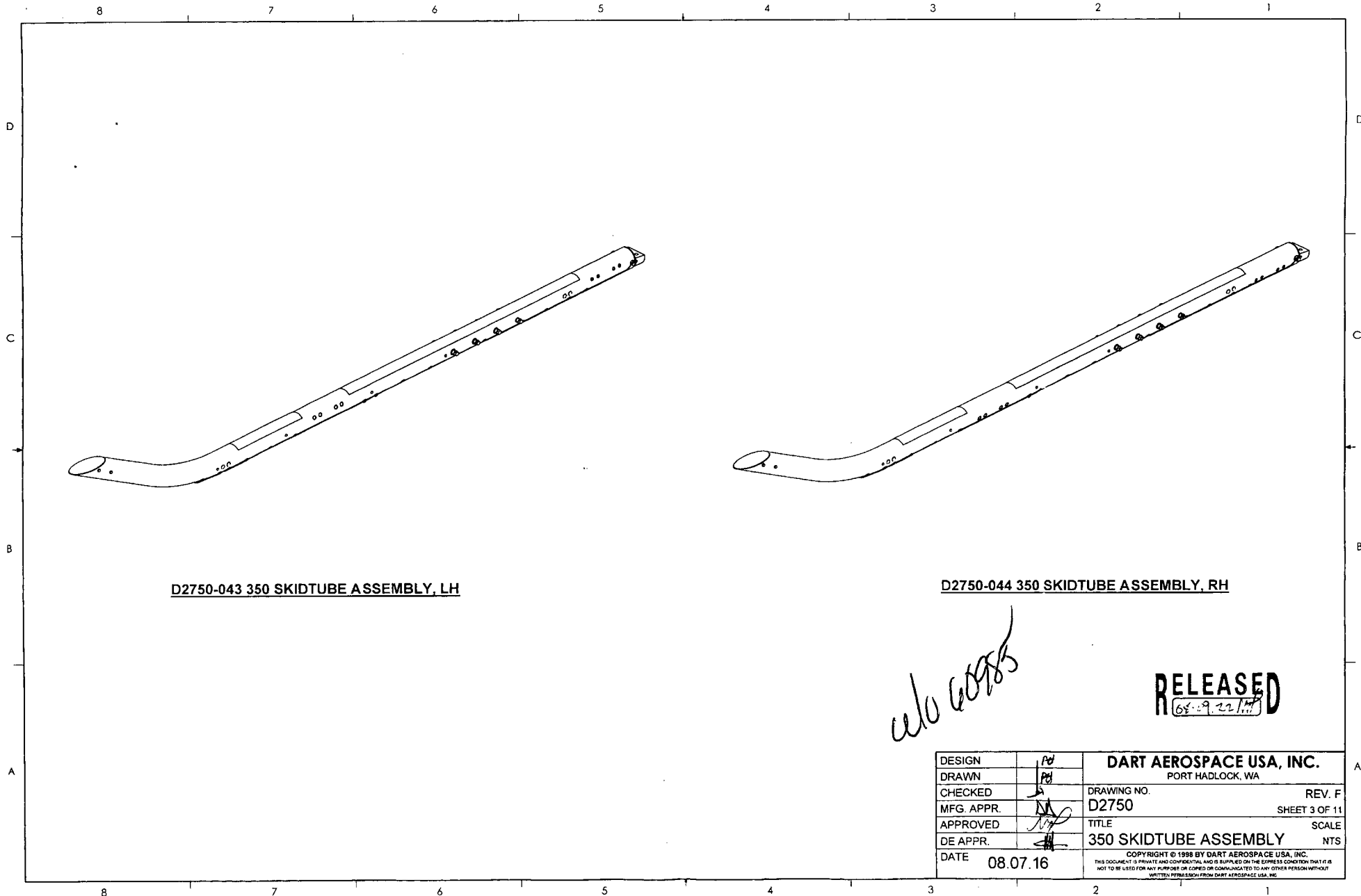
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D2750-043 350 SKIDTUBE ASSEMBLY, LH

D2750-044 350 SKIDTUBE ASSEMBLY, RH

celo 6/28/85

RELEASED
68-09-22/111

DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED	PH	DRAWING NO.	REV. F
MFG. APPR.	MA	D2750	SHEET 3 OF 11
APPROVED	MA	TITLE	SCALE
DE APPR.	MA	350 SKIDTUBE ASSEMBLY	NTS
DATE 08.07.16		<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.</small> <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR DISCLOSED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

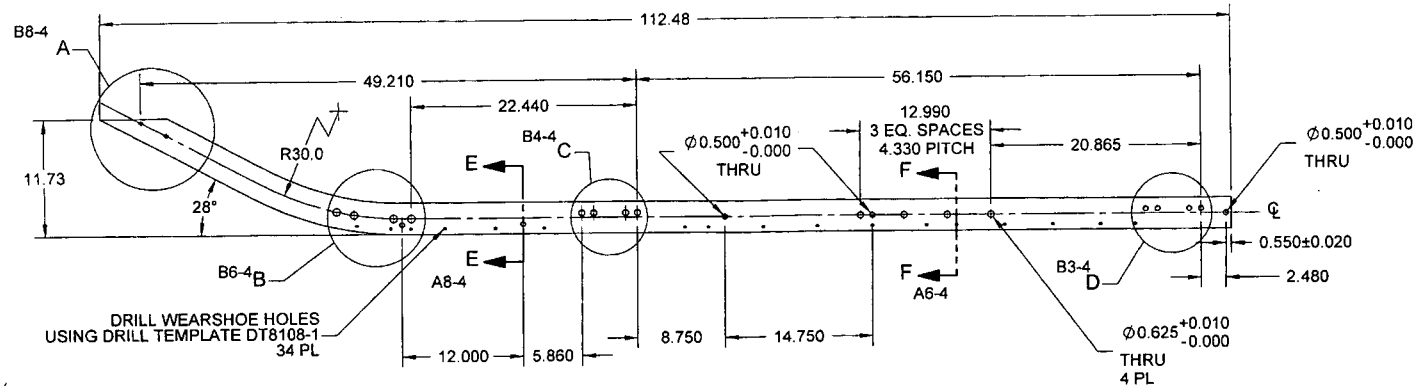
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

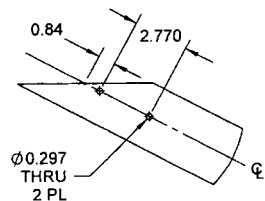
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

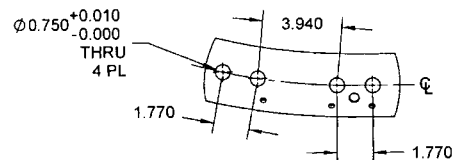
NOTE: Date & initial all entries



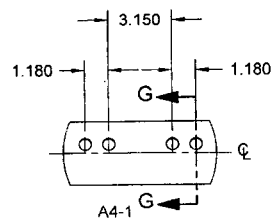
D2750-1 LH SKIDTUBE



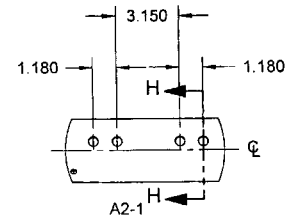
DETAIL A
SCALE 2X



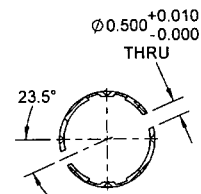
DETAIL B
SCALE 2X



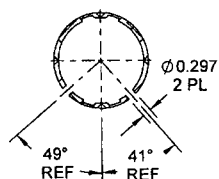
DETAIL C
SCALE 2X



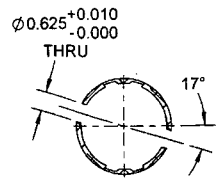
DETAIL D
SCALE 2X



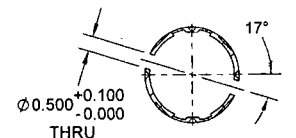
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

W. W. W. W.

RELEASED

DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 4 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

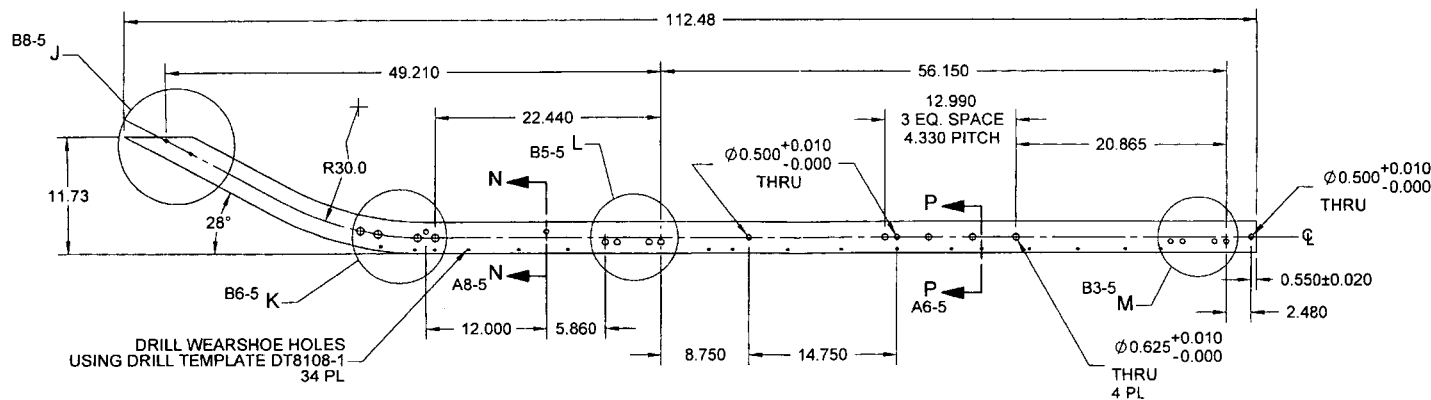
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

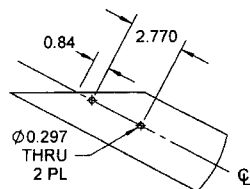
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

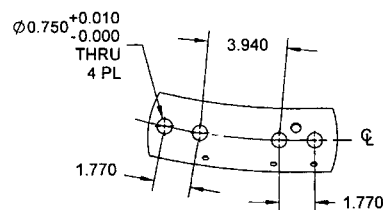
NOTE: Date & initial all entries



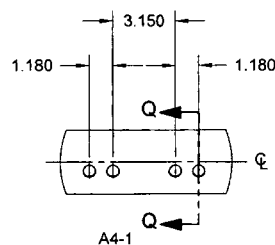
D2750-2 RH SKIDTUBE



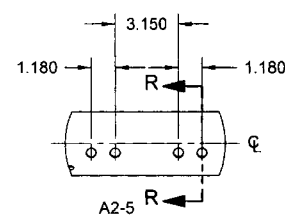
DETAIL J
SCALE 2X



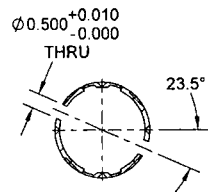
DETAIL K
SCALE 2X



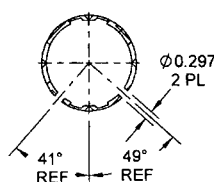
DETAIL L
SCALE 2X



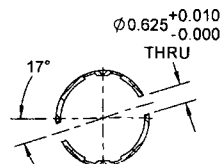
DETAIL M
SCALE 2X



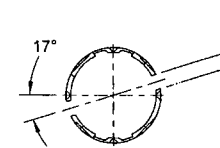
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

DESIGN	PEL	DART AEROSPACE USA, INC.	
DRAWN	PEL	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 5 OF 11
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WLB 60985

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08-12-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

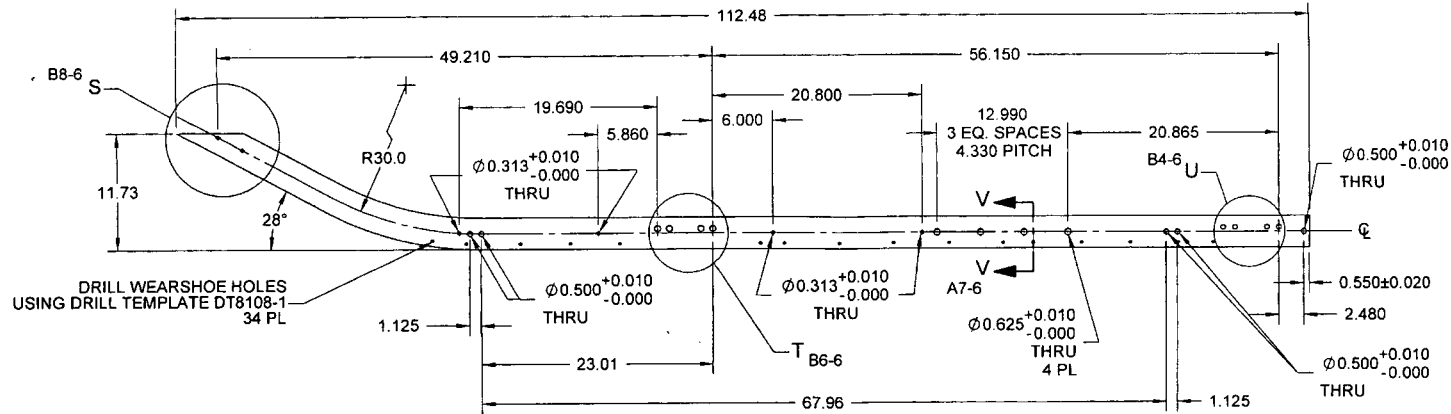
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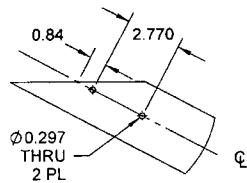
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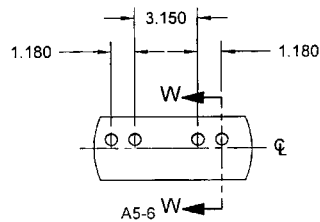
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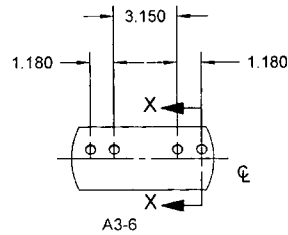
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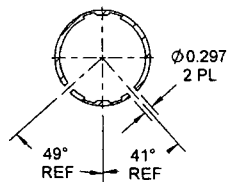
DETAIL S
SCALE 2X



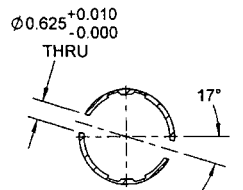
DETAIL T
SCALE 2X



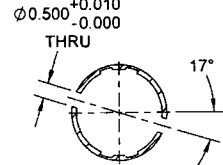
DETAIL U
SCALE 2X



SECTION V-V
SCALE 3X, 17 PL




SECTION W-W
SCALE 3X, 4 PL



SECTION X-X
SCALE 3X, 4 PL

WLO 40785

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DESIGN		DART AEROSPACE USA, INC.	
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MFG. APPR.		D2750	SHEET 6 OF 11
APPROVED		TITLE	SCALE
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DATE	08.07.16	NTS	
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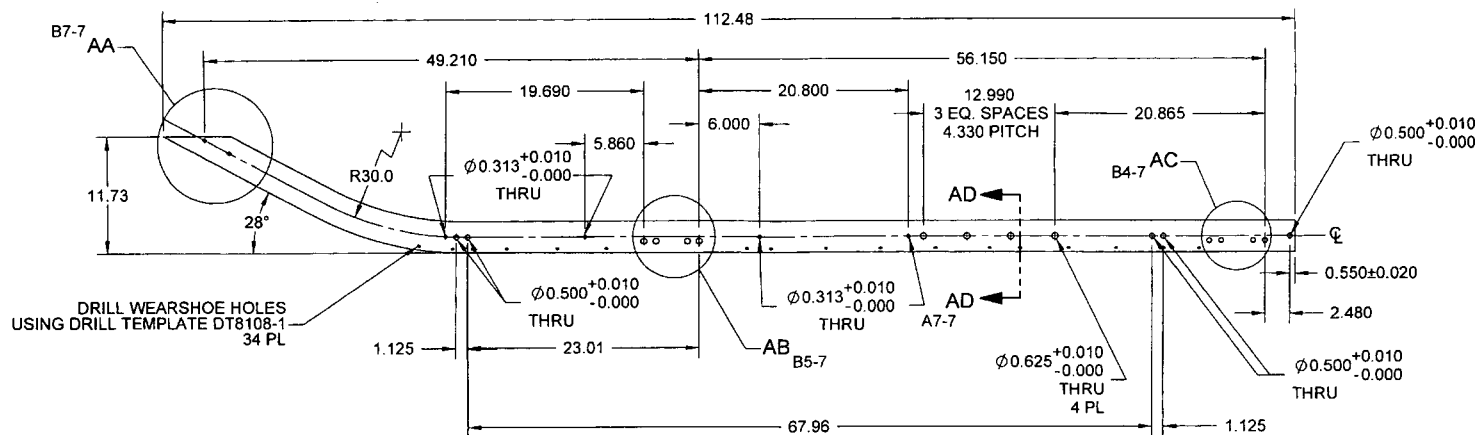
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

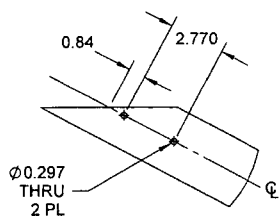
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

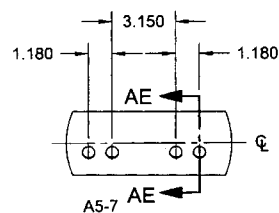
NOTE: Date & initial all entries



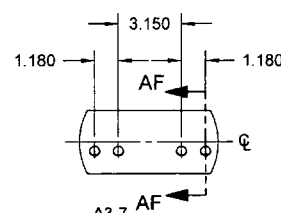
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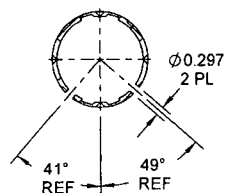
DETAIL AA
SCALE 2X



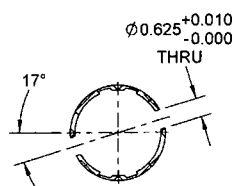
DETAIL AB
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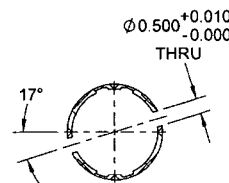
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

wo 60985

RELEASED
06-04-2016

DESIGN	AK	DART AEROSPACE USA, INC.	
DRAWN	AK	PORT HADLOCK, WA	
CHECKED	AK	DRAWING NO. D2750	REV. F
MFG. APPR.	AK	SHEET 7 OF 11	
APPROVED	AK	TITLE 350 SKIDTUBE ASSEMBLY	SCALE
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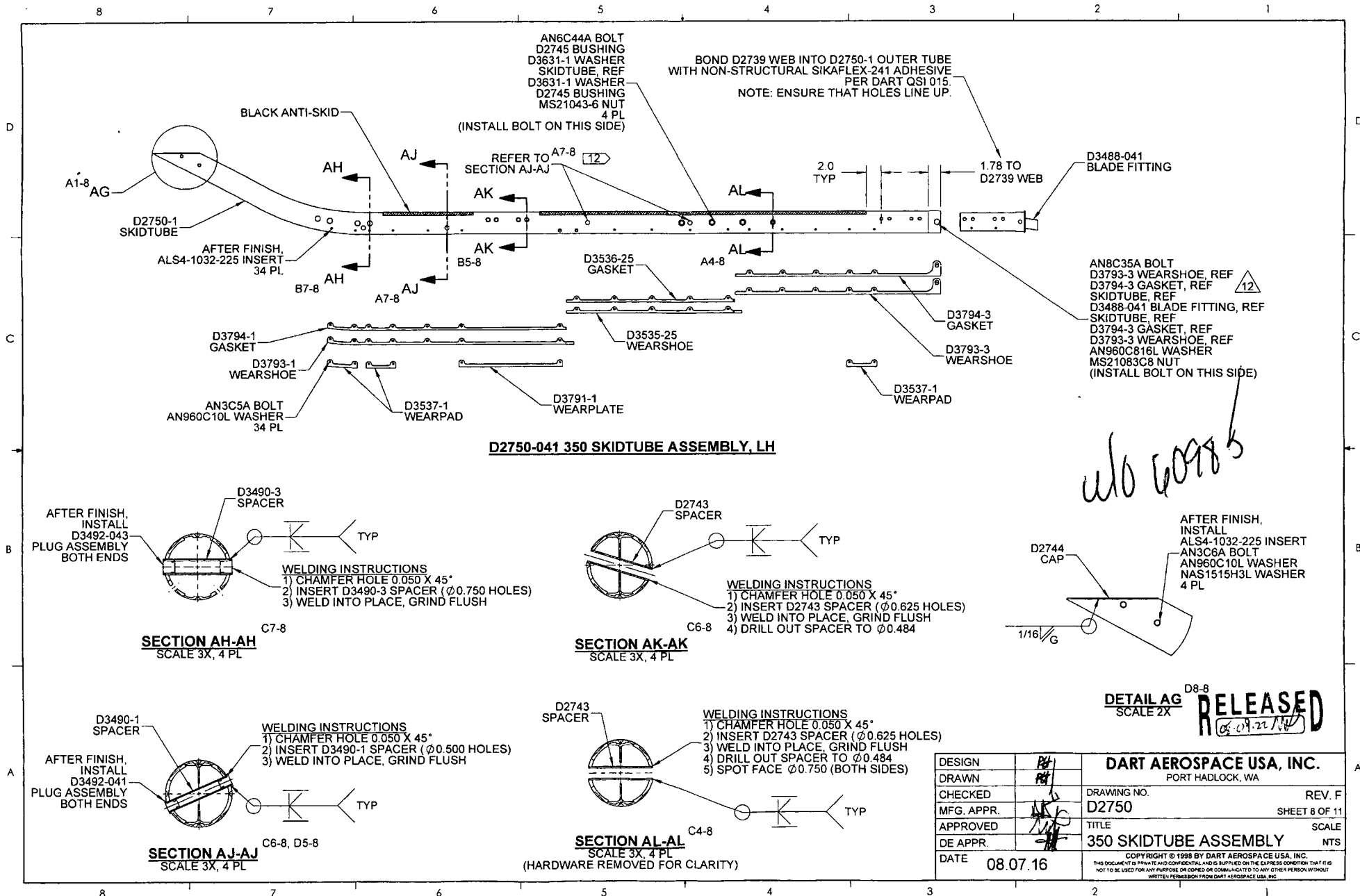
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

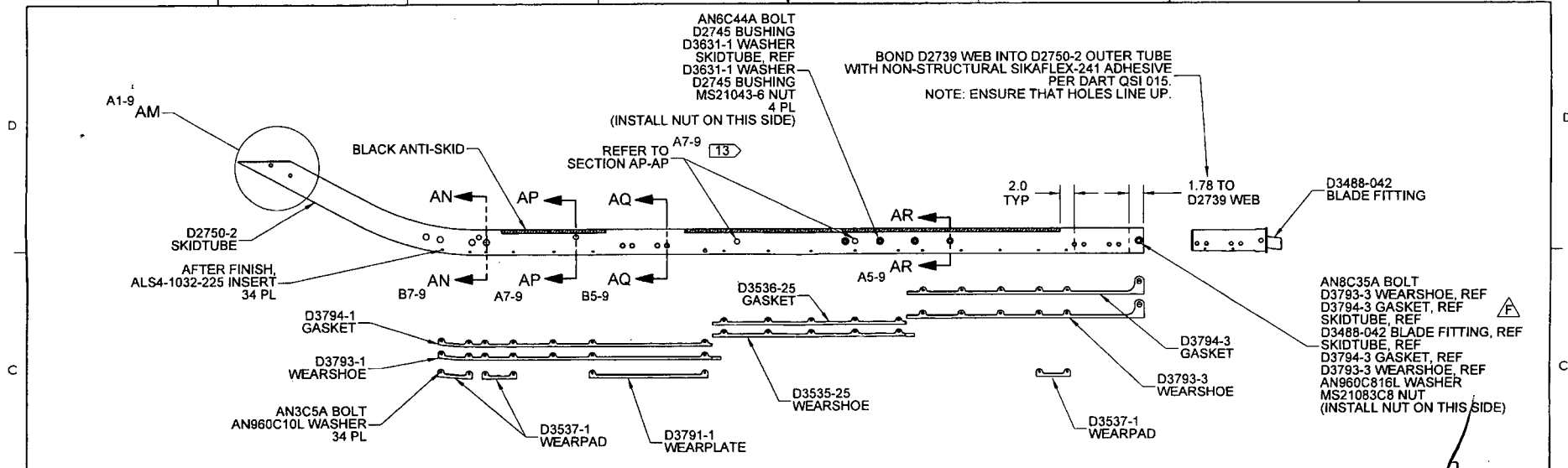
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

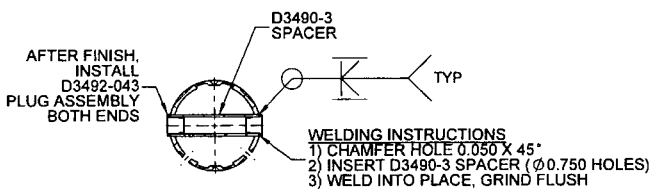
NOTE: Date & initial all entries

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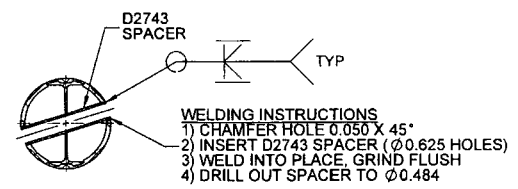


D2750-042 350 SKIDTUBE ASSEMBLY, RH

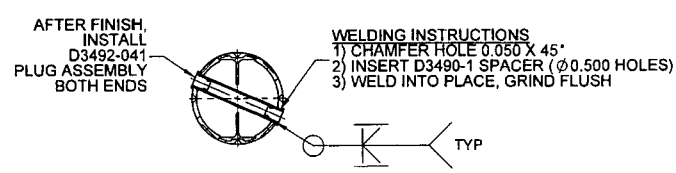
WLB W0783



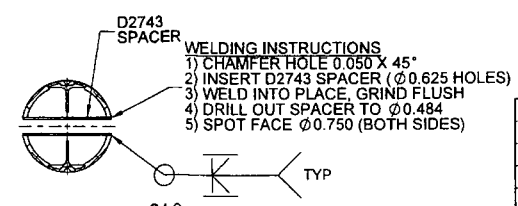
SECTION AN-AN
SCALE 3X, 4 PL



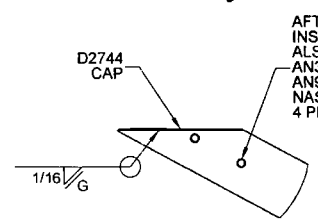
SECTION AQ-AQ
SCALE 3X, 4 PL



SECTION AP-AP
SCALE 3X, 4 PL



SECTION AR-AR
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



DETAIL AM
SCALE 2X

RELEASED
08-07-16

DESIGN	PH	DART AEROSPACE USA, INC.	
DRAWN	PH	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 9 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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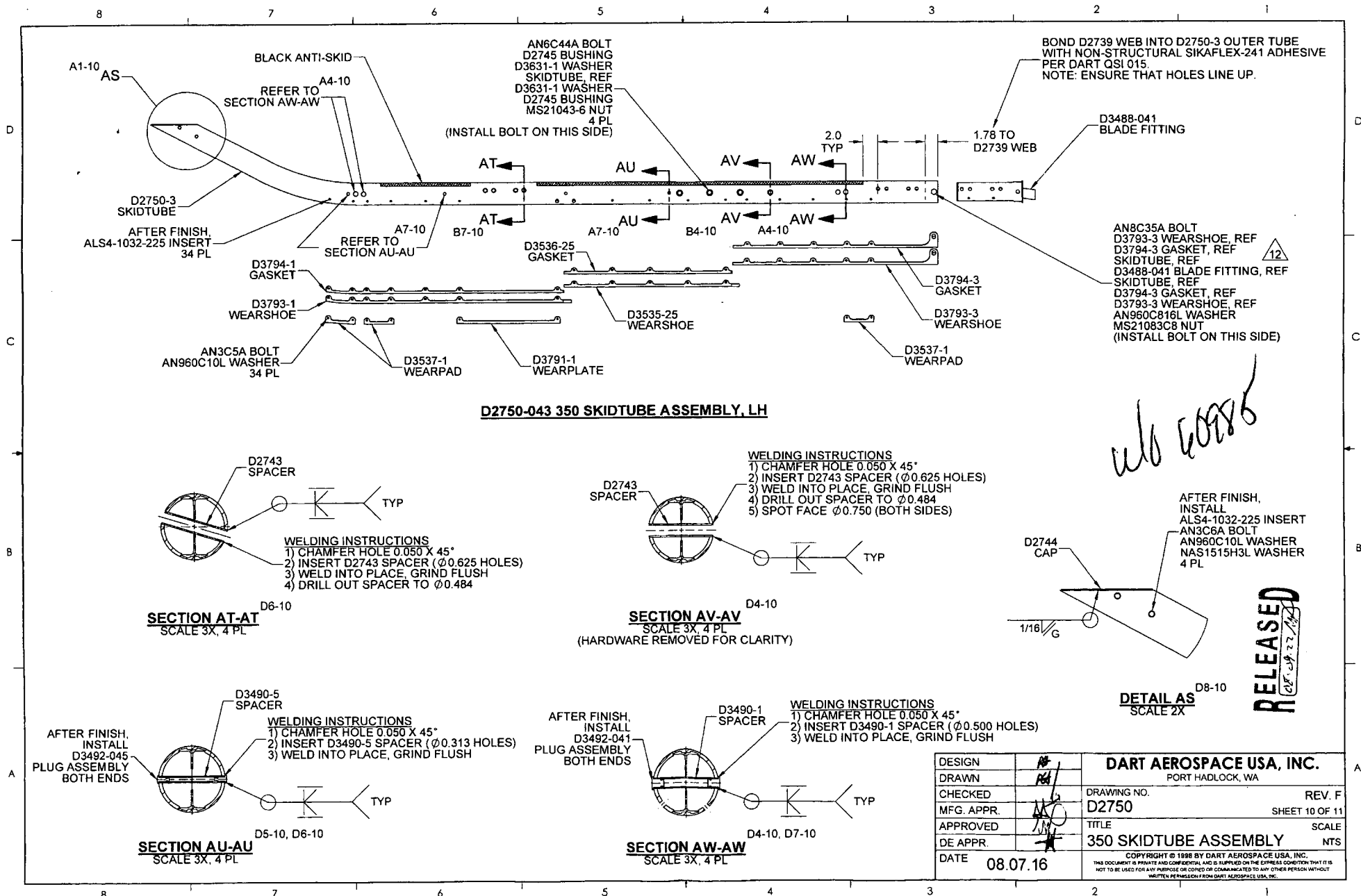
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



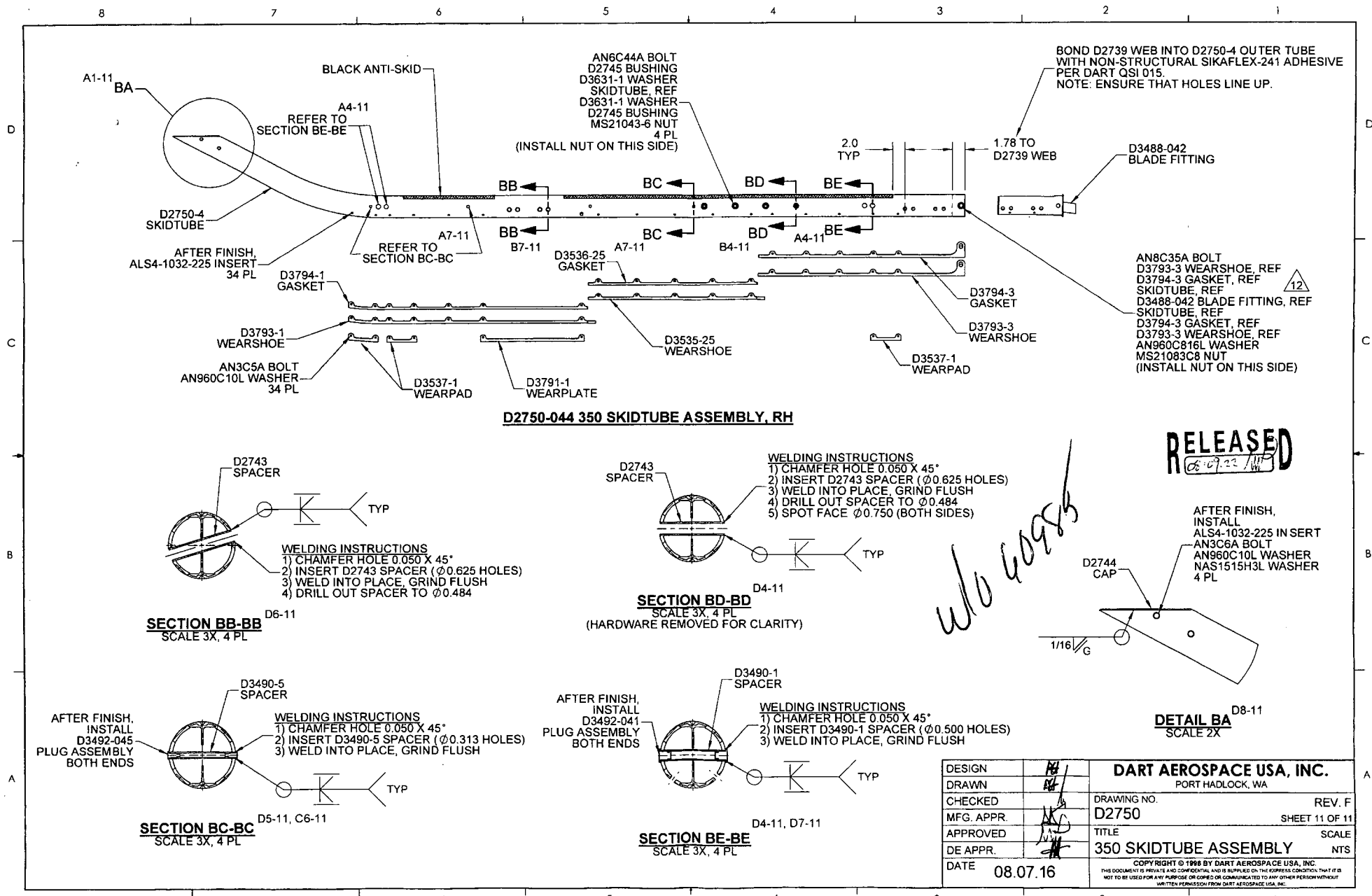
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 234

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 59818
Part number: D350-626-011
Description: 350 skid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier P. D. A. Date of Test Coupon 10-06-21
Welder Barclay Elliott Date of Test Coupon 10-06-21

The above named individual is qualified in accordance with AWS D17.1.2001 to weld